

**Subactivity: Protected Species Research and Management**  
**Line Item: Protected Species**

**GOAL STATEMENT:**

Provide accurate and timely information and analyses for the conservation of the Nation's living marine resources, and implement and monitor living marine resource management measures to recover protected species in support of the National Oceanic and Atmospheric Administration (NOAA) Strategic Plan goal to "protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management." The ultimate desired outcome is to recover and sustain all protected species (i.e., all ESA-listed species and all marine mammal populations) to be fully functioning components of their ecosystems. The Protected Species Program (PSP) administers the conservation and management activities that support this outcome. The Ecosystem Observations Program (EOP) and Ecosystem Research Program (ERP) support the PSP by providing the monitoring, assessment, and management-directed research needed for management.

**BASE DESCRIPTION:**

Base activities support the objective to "enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce Strategic Plan goal to "observe, protect, and manage the Earth's resources to promote environmental stewardship."

The Protected Species Program (PSP) is responsible for the conservation of species through implementation of the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA), and other statutes and international treaties and conventions. Protected species are defined as all marine mammal stocks under MMPA, and all marine and anadromous species listed as threatened or endangered under the ESA. The PSP administers the conservation and management activities, and the Ecosystem Observations Program (EOP) and Ecosystem Research Program (ERP) support the PSP by providing the monitoring, assessment, and management-directed research needed for management.

**Protected Species Science**

Protected species science is administered by the EOP and ERP and conducted by the NMFS Regional Science Centers. The EOP is responsible for surveys and assessment, while the ERP is responsible for management-directed research. Activities consist of scientific investigation and research for the science-based protection, recovery, and conservation of protected living marine resources, including understanding the dynamics of protected living marine resources within their ecosystems and the environment. NMFS specifically investigates the status of protected species populations and the potential impacts of human activities (e.g., commercial fishing, commercial and military shipping, hydroelectric dams and power plants, polluted effluents, ocean dumping, dredging, and logging) on protected species.

Protected species science focuses on three main areas: surveys, assessments, and management-directed research. Surveys involve the systematic gathering of information on species, including regional densities and overall abundance, seasonal distributions and movements, and sources of human-related mortality and serious injury. Assessments use surveys and other information to develop “status of stocks” assessments in the short term; over the long term they use time series of those assessments and predictive statistical modeling methods to forecast protected species population trends in the context of conservation actions and natural environmental factors. Management-directed research focuses on specific questions concerning the effects of human activities on protected species and the resources on which they depend. This research may include more detailed information on habitat use; spatial and temporal distributions; and biological, behavioral, and environmental effects.

**Surveys.** NMFS uses vessel, aircraft, and remote sensing platforms to obtain fundamental information to support protected species management. Systematic, statistically based surveys collect information on the seasonal distribution of, and habitat types used by, protected species. Additional information collected in conjunction with surveys related to life history (e.g., growth rates, sex and age structure of the population, age of sexual maturity, age-specific birth and death rates, and longevity) allow scientists to assess the status of protected species populations more completely than if they relied on abundance and trend information alone. In recent years, newly developed passive acoustic detection methods have demonstrated the potential for significantly augmenting traditional visual-based surveys by allowing the expansion of surveys in time and space, during conditions of poor visibility, and at night. Autonomous sensing devices (e.g., acoustic recorders) enable cost-effective detection of protected species in habitats and areas not suited to traditional surveys (e.g., polar seas and open ocean during winter) and at minimal risk to human safety. Acoustic monitoring also gathers information on the sources and intensities of ocean noise to which protected species are exposed in the regions they inhabit. Biomolecular genetics and modern approaches to stock identification and stock structure provide data necessary to distinguish population stocks and management units of protected species in support of appropriate and prudent listing determinations.

**Assessments.** Status of stocks assessments and analyses of population trends over time provide the biological basis for management actions to effectively recover and conserve protected species and minimize the impacts of human activities under Section 7 of the Endangered Species Act (ESA). NMFS is responsible for undertaking timely assessments of the listed species protected under the Marine Mammal Protection Act (MMPA) and the ESA. Depleted species must be assessed annually, ESA-listed species must be assessed at five-year intervals, and nonlisted species must be assessed at regular intervals to track population trends. Assessments inform management on the status of protected species populations and the effects of regulatory actions (e.g., seasonal area closures, bycatch reduction measures, and ocean noise reduction) designed to mitigate harm to and improve the status of protected species.

**Management-directed research.** Several emerging issues affect the recovery and wellbeing of protected species and require scientifically based information to support development of meaningful mitigation and regulatory actions. Among these emerging challenges are reducing bycatch in commercial fisheries, reducing the threat of commercial shipping vessel collisions with large whales, and evaluating the effects of anthropogenic ocean noise on protected species.

Management-directed research programs expand and implement novel research and analyses to: 1) identify and quantify the effects of anthropogenic and natural factors on protected species populations and the variability of these effects over time and space; 2) identify and evaluate options for management tools to be used in a wide variety of issues relating to protected species management; and 3) conduct ecosystem and habitat research (e.g., environmental change, food requirements, and habitat requirements) to support an ecosystem approach to protected species management.

### **Protected Species Conservation and Management**

The PSP shares the responsibility for implementing the ESA and MMPA with the Department of the Interior's Fish and Wildlife Service. To describe the division of responsibilities in general terms, the Department of the Interior is responsible for the conservation of terrestrial and aquatic (freshwater) organisms and NOAA is responsible for conservation of living marine resources, which includes most marine mammals, most marine and anadromous fish (both commercially valuable and nonharvested species), turtles at sea, and species of marine invertebrates and plant life. The PSP is charged with three main tasks: pursuing proactive conservation efforts, formally listing species in need of protection, and recovery and conservation of species once they are listed.

**Proactive conservation** efforts help species that are approaching the need for listing under the ESA and MMPA. Species in this category are referred to as “species of concern” or “candidate species.” Because the prescriptive measures of the ESA and MMPA can prove costly, proactive conservation often is more cost-effective than recovering a population once it is listed.

**Listing of species.** Once a species has become threatened or endangered under the ESA, the PSP is responsible for formally **listing** the species and designating its critical habitat. Currently, 53 domestic marine species are ESA-listed:

- 13 marine mammals
- 8 sea turtles
- 1 Atlantic salmon
- 26 Pacific salmon
- 5 other protected species

The PSP manages 167 marine mammal stocks under the MMPA—of these stocks, six have been identified as depleted.

After the formal listing process is completed, the bulk of the program's work is on **conservation and recovery**. This involves management and planning to remove or minimize human impacts and provide for population increase to functional levels, much of it in concert with Federal, State, tribal, local, international, and private partners.

The PSP also coordinates outreach and education activities, and international activities related to protected species. This work cuts across all program sectors, from proactive efforts to recovery. The PSP's recovery and conservation capability can be further divided into the following specific program activities.

**Recovery planning and implementation.** ESA recovery plans and marine mammal conservation plans are being developed or updated for all ESA-listed species and for all marine mammals designated as depleted under MMPA. NMFS recently developed guidance for recovery planning efforts to ensure that all recovery plans meet the requirements of the ESA. Recovery plans are key to informing management decisions under ESA section 7 and for analyzing the effects of scientific research and enhancement permits. As recovery plans are completed, NMFS works with Federal, State, and local agencies and the public to implement recovery actions.

**Partnerships with States, tribes, and local entities.** The PSP administers agreements with States (and Territories) under section 6 of the ESA and provides limited funding in the form of grants to implement conservation actions in these States for listed, recently de-listed, and candidate species. Funding may support the development and implementation of management strategies, scientific research, or public outreach and education activities. NMFS currently has section 6 agreements with 11 States, and the PSP is actively working to develop additional agreements. NMFS has also entered into agreements with West Coast States and tribes to implement the Pacific Coastal Salmon Recovery Fund (PCSRF). The PSP administers the PCSRF by coordinating development of performance measures and preparing an annual report to Congress on funded activities. Under the MMPA, the PSP has entered into agreements with Alaska Native groups regarding the management of harvested marine mammal stocks in Alaska; these cooperative agreements provide funding for cooperative management. The PSP also works to develop Habitat Conservation Plans under the ESA with non-Federal entities wishing to receive permission to incidentally take listed species as part of otherwise lawful activities. Currently these efforts are focused on Pacific salmon and they are being expanded to other species.

**Federal agency consultations.** The greatest amount of PSP resources are spent on ESA section 7 consultations. Section 7 of the ESA requires Federal agencies, in consultation with the Secretaries of Commerce and of the Interior, to ensure that any action they fund, authorize, or undertake is not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat that has been designated for such species. In addition to conducting section 7 consultations, the PSP performs training, quality control, and guidance development. The PSP is required to complete consultation with action agencies under strict timeframes. These demands are especially high for consultations on the registration of pesticides and Clean Water Act criteria and the PSP requires resources to keep up with an increased demand for these consultations. The PSP has invested heavily in efficiency improvements through streamlining agreements and the use of programmatic consultations.

**Marine animal health and stranding response.** PSP's Marine Animal Health and Stranding Response program coordinates response activities through a stranding network, using funds from the Prescott Grant program; administers the National Marine Mammal Tissue Bank; and maintains databases for tracking marine mammal tissue and stranding response activities.

**Fishery interactions.** This PSP activity reduces the impact of commercial and recreational fisheries on protected species. Efforts include management of the NMFS Tuna/Dolphin program, MMPA fishery registration and authorization, MMPA take reduction planning, and take reduction of sea turtles in fisheries.

**Permitting and take authorizations.** PSP issues permits related to direct and indirect take of listed species under sections 4(d) and 10 of the ESA and sections 101, 104, and 118 of the MMPA. An increased demand for permits has been accompanied by a need to improve the quality of National Environmental Policy Act (NEPA) analysis related to permit actions. This permitting activity applies to the entire public, unlike ESA section 7 that applies only to Federal activities. Adequate resources for permit processing and analysis will ensure NOAA's ability to provide timely public service with minimal disruption and risk of lawsuits.

#### **PROPOSED LEGISLATION:**

The Administration will work with Congress to reauthorize the Marine Mammal Protection Act, P.L. 103-238, and the Endangered Species Act (ESA), P.L. 100-478.

### SUMMARIZED FINANCIAL DATA

(Dollars in thousands)

Subactivity: Protected Species Research and Management	FY 2005 ACTUALS	FY 2006 CURRENTLY AVAILABLE	FY 2007 BASE PROGRAM	FY 2007 ESTIMATE	INCREASE / DECREASE
Line Item: Protected Species					
Protected Species Base	26,266	25,741	25,992	31,817	5,825
Atlantic Salmon	5,183	4,375	4,405	5,850	1,445
Pacific Salmon	45,170	56,341	56,752	66,416	9,664
Marine Turtles	14,943	13,438	8,996	9,646	650
Marine Mammals	81,504	40,212	21,351	23,110	1,759
Other Protected Species	2,464	4,932	4,932	8,085	3,153
<b>TOTAL</b>	<b>175,530</b>	<b>145,039</b>	<b>122,428</b>	<b>144,924</b>	<b>22,496</b>
<b>FTE</b>	<b>648</b>	<b>646</b>	<b>646</b>	<b>657</b>	<b>11</b>

Note: The dollars in this table represent budget authority.

#### PROGRAM CHANGES FOR FY 2007:

**Protected Species Research and Management Programs (+7 FTE and \$5,825,000):** NOAA requests an increase of \$5,825,000, for a total of \$31,817,000, for Protected Species Research and Management Programs: \$2,825,000 and 2 FTE for Marine Mammals, Sea Turtles, and Other Protected Species/Endangered Species Act (ESA) and \$3,000,000 and 5 FTE for Protected Species Stock Assessments and Mortality Estimation.

Marine Mammals, Sea Turtles, and Other Protected Species/Endangered Species Act (ESA) - \$2,825,000. ***Take Reduction Planning, ESA Consultations, Permitting, and Recovery of Marine Mammals and Sea Turtles.*** To meet requirements of the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA), NMFS must complete take reduction planning, recovery planning, ESA section 7 consultations, permitting, and mandatory ESA 5-year status reviews. This request will allow the Protected Species Program to continue court-ordered take reduction planning, complete ESA consultation on federal actions, develop programmatic NEPA documents for permits and Incidental Harassment Authorizations, revise recovery plans for sea turtles, and complete ESA 5-year status reviews for marine mammals and sea turtles. This increase will fund \$1,300,000 of the \$5,000,000 in activities funded through the FY 2006 congressionally enacted Marine Mammal Initiative to continue marine mammal permitting, take reduction planning, and recovery planning and implementation.

## **Statement of Need**

The ESA and MMPA require that the Protected Species Program conserve and recover protected species through ESA listings, MMPA take reduction planning, ESA recovery planning, ESA consultations, and implementation of actions that reduce the highest priority threats to species survival and recovery. The Protected Species Program is requesting additional funding to carry out these efforts because current funding is inadequate to address even the highest priority needs of the program.

## **Proposed Actions**

NMFS will meet its responsibilities the MMPA and ESA by undertaking the following actions:

- Implement, under court settlement, take reduction planning efforts for the Atlantic Trawl and Pelagic Longline Take Reduction Teams. The program has funded this effort over the past 2 years using funds from the Marine Mammal Initiative. The request will continue these efforts and allow the program to complete take reduction planning efforts in these two areas in 2011.
- Complete 5-year status reviews for marine turtles and marine mammals. More than 5 years have passed since the ESA listing status was reviewed for all marine turtles and many marine mammals. Increased funding will allow the program to review the status of species and revise ESA listing designations if appropriate.
- Initiate recovery plans for newly listed marine mammals and revise marine turtle recovery plans. Because Southern Resident Killer Whales were listed as threatened under the ESA in 2005, increased funding will be used to complete recovery planning efforts for this species. Increased funding will also be used to initiate revisions to marine turtle recovery plans for the Atlantic, which have not been revised since 1992.
- Continue improvements to the marine mammal permitting process. Requested funds would be used to continue efforts to improve the marine mammal permitting process that were funded under the Marine Mammal Initiative in FY 2005 and FY 2006. These efforts include additional contract support for completion of permits, completion of programmatic NEPA documents on research permits, and completion of associated ESA section 7 consultations on permit actions.

## **Benefits**

The requested funding will allow the Protected Species Program to maintain and improve current efforts at addressing the core mandates of the program. Without the increase the program will be under increased litigation risk for inadequate permitting and lack of implementation of take reduction planning efforts. This effort will also improve customer service by reducing the time required to complete permit actions.

**Ocean Noise Effects** – Rising levels of ocean noise and their potential effects on marine species, particularly on protected species, has become a significant emerging issue in marine conservation. Sources of ocean noise include natural events (e.g., earthquakes) and anthropogenic activities (e.g., seismic exploration, military sonars, and commercial shipping). Research on human and non-human species indicates that some levels of sound and chronic exposure to sound may affect health, reproduction, behavior, and survival. Recent strandings of marine mammals suggest there may be a relationship between some anthropogenic sound sources and these stranding events.

### **Statement of Need**

NOAA's effort to fully comply with the MMPA and ESA requirements for managing human noise impacts on marine animals is impeded by the lack of information about noise and its effects to meet the terms of these acts without either over-regulating noise-makers or risking litigation. Underwater noise is a relatively new and unstudied topic. New information is needed in the following categories: (1) the amount of and trend in ocean noise, (2) what noise animals experience, (3) what effects noise exposure has on them, and (4) mitigation measures needed to reduce noise exposure. Several NOAA entities have combined forces to design a broad and proactive program to investigate these four issues, incorporate the resulting information into agency management capabilities, and develop education and outreach programs. This integrated program meets NOAA's legal mandate and complements, but does not duplicate, acoustics programs run by other entities.

### **Proposed Action**

NMFS will meet its responsibilities for managing human noise impacts on marine animals by undertaking actions in the following three general areas:

- **Determine Noise Characteristics Experienced by Marine Animals** – We have a limited ability to identify the characteristics of human noise received by marine animals and to predict its effects on their populations. Although acoustic integration models can predict these effects, the models require data inputs on the following subjects: (1) acoustic databases generated by the Global Ocean Noise Observing System (GONOS), (2) surveys of animals for numbers and densities, (3) depth distributions of many species measured by conventional time-depth recorders (noise exposure varies with depth), and (4) the kinds of behavioral responses animals make when exposed to sound. The survey techniques used to obtain population data will be improved by adding passive acoustic detection methods, and will be expanded in number and space.
- **Measure Behavioral and Auditory Effects of Noise Exposure on Marine Animals** – Concomitant with the first item above, the program will fund research on the effects of noise on individual animals. Science-based criteria have been developed that define the physical and behavioral impacts on individual marine mammals resulting from single acoustic exposures. However, the criteria for some animal groups are based on extrapolations from other animal groups. These extrapolations result in sections of the criteria being poorly supported and vulnerable to legal challenge. Directed laboratory and field research on the effects of noise on marine animal behavior and hearing will be conducted to fill these data gaps.

Data on individuals are required to successfully model the effects of noise on populations, for conservation of populations, and for the improvement of NOAA acoustics policy guidelines. Similar noise exposure criteria for fish and marine turtles, long-term exposure of individuals, and exposures of entire habitats will be developed over time. Each set of noise exposure criteria will require specific research to fill data gaps.

- **Develop Cost-Effective Measures for Mitigating Noise Impacts** – Agency policy guidelines for acoustic exposure will provide the agency with a logical and systematic approach to mitigating noise impacts. In addition, existing mitigation measures—such as ramp-up procedures for intense sound onset, nighttime shutdown procedures for seismic operations, and analyses of the effectiveness of acoustic harassment devices—need validation through field experiments. New visual and acoustic detection technologies will be developed to improve the detection of marine animals around intense human noise activities.

## **Benefits**

The benefits of this initiative are twofold: (1) completion of the research will help determine acceptable exposure criteria for marine mammals leading to improved conservation; and (2) improved research will lead to the most cost-effective criteria for the noise producers while still protecting marine mammals. Presently, criteria must be developed using the precautionary approach that ensures protection of marine mammals regardless of the quality of the information available.

## **Performance Goals and Measurement Data**

This increase will support the objective, “Enhance the conservation and management of coastal and marine resources to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Plan Goal of, “Observe, protect, and manage the Earth’s resources to promote environmental stewardship.” It also supports the NOAA Strategic Plan goal to “protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management,” and the FY 2007 GPRA measure, “Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels.”

<b>Performance Goal:</b> Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase	24	24	26	29	33	39
With Increase	24	24	26	29	33	39
Number of species with known impacts from fisheries for which mortalities have been reduced to acceptable levels						
Without Increase	117	118	119	124	126	127
With Increase	117	118	119	124	126	127
The time (days) necessary to obtain a scientific research/enhancement permit or incidental take authorization under the MMPA/ESA						
Without Increase	180	190	190	190	190	190
With Increase	180	190	180	165	155	145
Program output metric: Listed species with specific research directed at anthropogenic noise effects						
Without Increase	1	1	1	1	1	1
With Increase	6	6	6	6	6	6

Protected Species Stock Assessments and Mortality Estimation - \$3,000,000. NMFS requests an increase of \$3,000,000, for a total request of \$31,817,000, for the Protected Resources Research and Management Programs line item. The increase will be used for protected species stock assessments and mortality estimation and for reducing bycatch of protected species in fisheries. The requested increase will allow NMFS to increase the quantity and improve the quality of stock surveys and assessments that inform regulatory decisions. These assessments provide timely, reliable, and precise estimates of distribution, abundance, and mortality for listed species. Imprecise estimates increase the probability that species will be misclassified under the ESA or MMPA, resulting in increased risk to species, delay of recovery, and additional mitigation measures that pose significant economic losses to the regulated community.

Assessments also are critical to implementing the U.S. Ocean Action Plan because they will be used to establish acceptable levels of bycatch of marine mammals and turtles in the Atlantic Ocean and Gulf of Mexico. Currently, the quality of stock assessments for over 200 protected and at-risk marine species is inadequate for management purposes. NMFS will invest additional resources to make assessment information available to managers in order to minimize bycatch of protected species in fisheries and to increase transparency of the decision-making process.

This increase will fund \$2,000,000 of the \$5,000,000 in activities funded through the FY 2006 congressionally enacted Marine Mammal Initiative to continue marine mammal stock assessment improvement efforts.

### **Statement of Need**

Under the mandates of the MMPA and the ESA, NMFS must regularly evaluate the status of protected species. In addition, these laws prohibit the taking of protected species unless a specific exception is granted (usually through a permit or authorization) for a particular activity that may affect any protected species. These authorizations require NMFS to assess the impacts of the activity on protected species and their habitats in the context of other anthropogenic and natural factors that may affect the species. Therefore, timely, accurate, and precise biological information is needed to enable NMFS to determine the status of each stock or population and to design effective and efficient conservation programs to promote their recovery.

During the past decade, protected species stock assessment mandates have increased because of changes in how protected species management and science are conducted. These changes include increased international and domestic interest in observing systems; improved mapping capability; advent of ecosystem approaches; demands by courts and the public for greater precision, scientific certainty, and transparency in decisions; increased litigation by nongovernmental organizations to pursue policy and management agendas; expanding interest by executive branch leadership in partnerships among federal agencies; and completion of the comprehensive NOAA Requirements Planning and Program Review (2002). In court challenges NOAA's actions often are found to be "arbitrary and capricious," owing to the reality that the "best available" information on protected species is insufficient to support the proposed mitigation actions and/or permit requirements. In their rulings, courts often point to the need for greater accuracy and precision of scientific information, clear measures of scientific uncertainty surrounding these data, and transparency in the information on which management decisions are based.

To address and meet its mandates, NMFS must improve the quantity and quality of its protected species stock assessment data and analyses. NMFS must pursue a requirements-based program to increase and improve its protected species stock assessment activities in the context of broad-based, integrated ecosystem investigations. This requirements-based program is encompassed in the development of "A Requirements Plan for Improving Understanding of the Status of U.S. Protected Species" (Protected Species Stock Assessment Improvement Plan, SAIP). This plan outlines the actions needed to move protected species stock assessments for marine mammals and turtles to a Tier II (adequate) level. The major limiting factors for completing improved assessments are ship and aircraft time to complete surveys, contract personnel to carry out observations on ships and aircraft, and NOAA personnel to complete the analysis and assessment of species information. These needs represented the highest priority gap within the Protected Species surveys and assessments capability for the Ecosystem Observations Program.

## **Proposed Action**

Protected Species Surveys and Assessments Nationally and in the Gulf of Mexico Ecosystem. With this increase, NMFS will improve its capabilities in two specific areas: overall national capacity to complete stock assessments, and implementation of specific actions needed to implement an ecosystem approach to management in the Gulf of Mexico ecosystem.

- Overall national capacity to implement the Protected Species SAIP will be improved through maintenance of support for survey and assessment activities nationwide. Marine Mammal stock assessment activities funded under the marine mammal initiative in FY2006 are supported by this request. Without this increase the number of adequate protected species assessments will decline even further from current levels. The survey effort will consist of \$900,000 in ship and aircraft contract support, and \$1.2 million in contractor support to perform observations, complete subsequent assessments, and make information readily available to managers. Without the requested funding, the program will not maintain current efforts and will see a net decrease of 27 protected species stocks having adequate assessments through 2010.
- Protected species survey and assessment efforts will be increased in the Gulf of Mexico ecosystem in order to implement NOAA's ecosystem approach to management. Starting in FY 2007, NOAA will implement a 3-year rotating survey and assessment effort to characterize marine mammal stocks in the Gulf of Mexico. This effort will include an annual survey that will focus on Gulf-wide observations of abundance in the first year, biopsy sampling and stock identification in the second year, and collection of detailed oceanographic data and prey density information in the third year. The collected information will be used to develop spatially explicit models of abundance and seasonal distribution for management purposes. This additional information will be gathered by increasing the frequency of observations (\$400,000 for ship and aircraft contract support) and by improving the quality of assessment documents through analysis of existing datasets (\$250,000 for salaries and related expenses, and \$250,000 for contractor services). The requested increase will also fund additional staff and contract support to analyze existing state and federal datasets on non-marine mammal protected species to improve the quality of assessments in the Gulf of Mexico. This effort will improve survey and assessment efforts for 10 protected species populations, with fully adequate assessments completed by 2010.

## **Benefits**

The goal of improving the stock assessment program is to provide sufficient reliable scientific information for NMFS to make protected species management and regulatory decisions. Such a decision-making process will allow Americans to enjoy maximum benefits while ensuring that the uses of these resources do not have significant adverse impacts on protected species.

As stock assessments improve, managers will be increasingly able to address the cumulative and indirect effects of various human activities and natural environmental variability on protected species.

The requested increase will provide needed resources and reduce the need to promulgate conservative, costly, and sometimes burdensome mitigation measures on constituents.

**Performance Goals and Measurements Data:**

This increase will support the objective, “Enhance the conservation and management of coastal and marine resources to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Plan Goal of, “Observe, protect, and manage the Earth’s resources to promote environmental stewardship.” It also supports the NOAA Strategic Plan goal to “protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management,” and the FY 2007 GPRA measure, “Percentage of Living Marine Resources with Adequate Population Assessments and Forecasts.”

The expansion of stock assessment resources will directly affect this measure by improving the quality and quantity of surveys and the resulting assessment documents.

<b>Performance Goal 3: Ecosystem Performance Measurements</b>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Percentage of Protected Species with Adequate Population Assessments and Forecasts <sup>1</sup>						
Without Increase	27.4%	25.7%	25.7%	20.4%	16.1%	13.9%
With Increase	27.4%	25.7%	25.7%	24.8%	24.8%	27.0%

1. This is a subset of the GPRA measure “Percentage of Living Marine Resources with Adequate Population Assessments and Forecasts.”

**Marine Mammals (0 FTE and \$1,759,000)** – NOAA requests an increase of \$1,759,000, for a total of \$23,110,000, for the Marine Mammals line item. This request has two components: dolphin encirclement and recovery of endangered large whales.

Dolphin Encirclement – \$1,259,000. Increased funds are necessary to fully fund continued long-term monitoring of the Eastern Tropical Pacific dolphins stocks, called for in MMPA section 304(b). This research includes population abundance monitoring, long-term stress monitoring, implementation of the system for tracking and verification of Dolphin-Safe Tuna, and implementation of MMPA import requirements for tuna harvested in the Eastern Tropical Pacific.

## **Statement of Need**

Under Sec. 304(b) of the MMPA, NMFS is required to conduct research to support the International Dolphin Conservation Program (IDCP). This research is integral to the IDCP because NMFS is the primary provider of information on the Eastern-Tropical Pacific (ETP) dolphin stocks for the IDCP. In addition to completing the population abundance monitoring cruise, in FY 2007 NMFS will start a cruise to determine the stock structure of coastal spotted dolphins. Current data support the hypothesis that there are multiple stocks of coastal spotted dolphins, although they are currently managed as a single stock. As a single stock, these dolphins were classified as depleted under the MMPA, and no full assessment has been done. This cruise will further clarify the number of stocks and their boundaries, as well as the current abundance of each, and it is essential for meeting our mandated responsibilities. Given the number of permits needed from Central American countries, NMFS has already begun to work with the Department of State and the Parties of the IDCP to promote this cruise as an international dolphin research project. This will allow us to forge partnerships with other countries and build their capacity to collect data on their dolphin stocks.

Without this budget increase, NMFS will not be able to maintain the tuna-tracking and verification program, which ensures that tuna sold as “dolphin-safe” meets that standard. Without appropriate staffing and site inspection, NMFS will be not able to meet its obligations under the Dolphin Protection Consumer Information Act. In addition, the tuna-tracking program provides valuable data to numerous Regional Fisheries Management Organizations, such as the International Commission on the Conservation of the Atlantic Tunas (ICCAT).

In addition, NMFS is appealing litigation concerning the dolphin-safe label. On August 9, 2004, the 9<sup>th</sup> Circuit Court ruled against NMFS in *Earth Island v. Evans*, citing that NMFS had poor data to make the management decision to change the definition of dolphin-safe tuna. Without increased funds for the population abundance monitoring cruise, the coastal spotted cruise, and the tuna-tracking program, NMFS will be vulnerable during this appeal as well as during any future litigation.

## **Proposed Action**

This increase will allow NMFS to complete the population abundance monitoring cruise and begin the coastal spotted dolphin cruise. These cruises will provide new data on dolphin stocks that will allow us to ensure that stock mortality limits in the ETP fishery are appropriate. NMFS will also continue the tuna-tracking and verification program to ensure that cans of tuna bearing the dolphin-safe label truly are dolphin-safe.

## **Benefits**

By fulfilling our obligations under Sec. 304(b) of the MMPA and the IDCP, NMFS will be able to better manage the ETP dolphin stocks, continue to ensure that tuna labeled as dolphin-safe is in fact dolphin-safe, and reduce the likelihood of litigation.

Recovery of Endangered Large Whales – \$500,000. The information collected and techniques implemented will improve stock assessments and our understanding of population recovery needs for endangered large whales. This information will enable NOAA to detect changes in the status of large whales in order to prevent long-term and irreversible damage to these populations. The problems or information gaps to be addressed include: population structure, abundance, migratory patterns, and habitat needs. This initiative began in FY 2003 with a modest program focusing on humpback whales, but was not funded in FY 2004. The program was continued in FY 2005 and FY 2006.

### **Statement of Need**

Twenty-three stocks of eight species of large whales are listed as endangered or threatened under the ESA or listed as depleted under the MMPA. During the past 30 years, only the Eastern North Pacific Gray Whale population has been removed (i.e., delisted) from the ESA's List of Endangered and Threatened Wildlife because it was deemed recovered. A number of additional whale stocks may have also recovered, but stock assessment information to confirm this is lacking. NMFS has insufficient Protected Species funds to assess the status of large whales relative to their recovery under the MMPA and ESA. Basic information necessary to evaluate a population's recovery—such as abundance estimates and trends, population structure, and knowledge of their habitat—is lacking. This information can be acquired with relatively small, focused investments in field and laboratory research.

### **Proposed Action**

This initiative will benefit large whale recovery efforts by both the United States and the International Whaling Commission (IWC) because it will establish a funding base to determine the stage of recovery of numerous populations of large whales and initiate innovative sampling and analytical methods that will provide information on the status and trends of whale populations and their habitat requirements. Restoration of full funding will allow expansion of the research into the remaining five species of large whales.

### **Benefits**

Continuation of this initiative will provide the information to scientifically determine whether other species have recovered and are candidates for down-listing or delisting. If these stocks have not yet recovered, the information collected and techniques implemented will improve stock assessments and our understanding of population recovery needs.

## Performance Goals and Measurement Data

This increase will support the objective, “Enhance the conservation and management of coastal and marine resources to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Plan Goal of, “Observe, protect, and manage the Earth’s resources to promote environmental stewardship.” It also supports the NOAA Strategic Plan goal to “protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management,” and the FY 2007 GPRA measures, “Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels” and “Percentage of Living Marine Resources with Adequate Population Assessments and Forecasts.”

<b>Performance Goal:</b> Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase	24	24	26	29	33	39
With Increase	24	24	26	29	33	39

<b>Performance Goal 3: Ecosystem Performance Measurements</b> Percentage of Protected Species with Adequate Population Assessments and Forecasts <sup>1</sup>	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase	24.8%	25.7%	25.7%	20.4%	16.1%	13.9%
With Increase	24.8%	25.7%	25.7%	24.8%	24.8%	27.0%

1. This is a subset of the GPRA measure “Percentage of Living Marine Resources with Adequate Population Assessments and Forecasts.”

**Marine Turtles (0 FTE and \$650,000)** – NOAA requests a net increase of \$650,000, and a total of \$9,646,000, for Marine Turtles.

ESA Sea Turtles – \$650,000. These funds are necessary to continue research to recover highly endangered sea turtles within the United States and internationally. Funds will allow for the protection of the globally imperiled populations of green, hawksbill, olive ridley, loggerhead, and leatherback sea turtles. These funds will support the collection of information on biology and habitats.

### Statement of Need

Six species of sea turtles inhabit U.S. waters and all are federally listed as either endangered or threatened. The Pacific leatherback is among the most critically endangered species in the world, with recent estimates of extinction occurring within a few decades. The Pacific loggerhead and certain subpopulations of the Atlantic loggerhead are also seriously imperiled.

The most profound threats to these species are incidental capture in commercial fisheries and directed harvest in certain areas of their range. Other threats, such as nesting habitat degradation, marine habitat degradation, and vessel strikes continue to hamper their recovery. Recovery Plans have been completed for all listed sea turtles and the NMFS sea turtle program focuses on implementation of those plans.

### **Proposed Action**

The increase will allow NMFS to begin to implement the Atlantic / Gulf of Mexico Strategy to Reduce Bycatch of Sea Turtles in State and Federal Fisheries. The Strategy goals are (1) to conserve and recover sea turtles, (2) to evaluate the significance of bycatch by gear type, (3) to develop and implement conservation measures to reduce sea turtle bycatch, and (4) to authorize fishery takes consistent with Endangered Species Act mandates. Activities will include:

- **Gear Research** – Continue research on scallop dredge modifications and fishing practices to reduce sea turtle bycatch in scallop dredge gear and continue development and testing of pound net leader modifications to reduce loggerhead and Kemp’s ridley bycatch in pound net leaders, while minimizing risk to leatherback turtles.
- **Characterization of Fisheries in the State Waters** – Provide support to states for completion of reports characterizing fisheries in their state (fully describing fishing gears, fishing effort, observer effort, sea turtle interactions and relevant regulations).
- **Implement Gear Based Conservation Measures in State Waters** – Work with states to implement gear based measures based on findings from characterization reports.

### **Benefits**

Currently, there is little federal activity in state waters to protect sea turtles and few states have sufficient regulations. Implementing this strategy will allow NMFS to work towards implementing gear based solutions, not just fisheries based solutions. Reduction in the incidental capture of sea turtles in fishing operations has also been identified as a priority in all sea turtle recovery plans in the Atlantic.

### **Performance Goals and Measurement Data**

This increase will support the objective, “Enhance the conservation and management of coastal and marine resources to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Plan Goal of, “Observe, protect, and manage the Earth’s resources to promote environmental stewardship.”

It also supports the NOAA Strategic Plan goal to “protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management, and the FY 2007 GPRA measures, “Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels”, and “Percentage of Living Marine Resources with Adequate Population Assessments and Forecasts.”

<b>Performance Goal:</b> Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase	24	24	26	29	33	39
With Increase	24	24	26	29	33	39

**Other Protected Species (Marine Fish, Plants, and Invertebrates) (4 FTE and + \$3,153,000)** – NOAA requests an increase of \$3,153,000, a total of \$8,085,000 for Other Protected Species (Marine Fish, Plants, and Invertebrates). The funding is critical to recovering those NMFS ESA listed species that are not funded under a separate program, as well as those species nearing the need for ESA listing (Species of Concern). Activities supported by this funding include proactive conservation efforts, listings, section 7 consultations, and implementing recovery programs for species of concern, newly listed species, and hard corals, shortnose sturgeon, Gulf sturgeon, white abalone, Johnson’s seagrass, and smalltooth sawfish.

## Statement of Need

The Other Protected Species Program manages and supports recovery of 61 species marine listed under the Endangered Species Act, as well as 43 species of concern, many of which are former candidates for listing. The species managed and conserved under the Other Protected Species line are not included within other directed funding efforts, such as the Pacific Salmon line or the Marine Mammal or Sea turtle funding. Without adequate funding under the Other Protected Species line, NMFS would be forced to undertake more conservative management approaches, and thus increase the likelihood of negative interactions with other stakeholders, as well as delays in implementing existing species recovery plans (e.g. Johnson’s seagrass, white abalone, Gulf and Shortnose sturgeon), development of recovery plans for the proposed listings of green sturgeon and Acropora corals, and loss of opportunity to collect critical data on species and their habitats.

## Proposed Action

NMFS will meet its responsibilities to ESA listed marine, fish, plants, and invertebrates by undertaking actions in the following six general areas:

- **Proactive Conservation Efforts for Species** – These funds will be used to increase pilot proactive conservation efforts for species nearing the need for listing under the ESA. This pilot program focuses on reducing the risk of extinction for species by reducing threats to the species through on-the-ground conservation actions and development of management agreements. This measure will result in cost savings by preventing ESA listings and reducing the need for ESA consultation and permitting for species. On average, NOAA spends approximately \$5 million per year on fulfilling consultations, permitting and recovery requirements for each listed species. The pilot project is developing a performance measurement system for the program to determine the success of proactive conservation efforts.
- **Smalltooth sawfish** – Work with state agencies and private partners, especially in Florida, to reduce, monitor, and minimize impacts from incidental capture in state recreational and commercial fisheries (e.g. through developing conservation plans and incidental take permits); continue studies of sawfish habitat use to assess important habitat requirements and identify areas that may require special management and/or protection; work with federal and state agencies, and local communities, especially in Florida, to protect and restore mangrove and other nursery habitats; develop a population viability analysis for smalltooth sawfish to improve downlisting and delisting thresholds; convene meetings of the smalltooth sawfish recovery implementation team to ensure recovery actions are coordinated and carried out
- **Shortnose, Gulf, and green sturgeons (assuming green sturgeon proposed listing is made final in 2006)** – Work with states to reduce, monitor, and minimize impacts from incidental capture in state recreational and commercial fisheries (e.g. through developing conservation plans and incidental take permits); continue and expand studies of sturgeon habitat use to assess critical habitat requirements and identify areas that may require special management and/or protection; work with federal agencies and states to improve water quality, especially dissolved oxygen levels in warmer areas. Work with federal agencies and states to improve fish passage at hydropower facilities; establish recovery team to develop (for green sturgeon) and revise (shortnose and Gulf sturgeons) recovery plans; create and support recovery implementation team(s) to ensure recovery actions are coordinated and carried out.
- **White abalone** – Continue work to develop a viable captive breeding program for white abalone, including: 1) expanding research to identify outplanting areas, 2) improving husbandry techniques, and 3) revising disease management protocols; continue and expand monitoring to identify remaining aggregations of white abalone and to facilitate collection of broodstock for captive breeding program; continue and expand studies of white abalone habitat use to assess critical habitat requirements and identify areas that may require special management and/or protection; work with California to reduce/eliminate poaching and to reduce incidental capture of white abalone; improve cooperation with Mexico to coordinate white abalone research, monitoring, and management efforts.

- **Johnson’s seagrass** – Continue work with federal agencies and Florida to improve water quality in Johnson’s seagrass critical habitat and other important habitats; continue work with federal agencies and Florida to reduce impacts from coastal development (e.g. building of docks and marinas); expand research to understand reproductive biology and water quality tolerances of Johnson’s seagrass; continue and expand efforts to monitor the status and recovery of Johnson’s seagrass.
- **Elkhorn and Staghorn corals (assuming proposed listing is made final in 2006)** – Develop recovery plan for listed corals and establish an interagency recovery implementation team; work with federal, state, territorial, and local entities to reduce threats from physical damage (e.g. ship groundings, damage from anchors and fishing gear, diver interactions, construction activities); continue and expand research on the causes for the decline of listed corals, especially coral diseases and impacts from large-scale environmental conditions (e.g. ocean temperature, African dust storms); continue and expand coral monitoring and mapping efforts; work with federal, state, territorial, and local entities to improve water quality in areas inhabited by listed corals.

## Benefits

By funding activities for conservation, management, and recovery of listed species, which are not funded elsewhere within NMFS, the Other Protected Species line allows NMFS to meet its statutory obligations under ESA. In addition, by addressing critical data gaps for these species, and by completing recovery plans with stakeholder buy-in, NMFS can make decisions about future priorities for species conservation and management using “best available commercial and scientific data” as required by the ESA. Failure to collect these data and complete these recovery plans forces NMFS to act very conservatively in management decisions, which may result in negative interactions with, and legal challenges from, stakeholders for many of these species.

## Performance Goals and Measurement Data

This increase will support the objective, “Enhance the conservation and management of coastal and marine resources to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Plan Goal of, “Observe, protect, and manage the Earth’s resources to promote environmental stewardship.” It also supports the NOAA Strategic Plan goal to “protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management, and the FY 2007 GPRA measures, “Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels”, and “Percentage of Living Marine Resources with Adequate Population Assessments and Forecasts.”

<b>Performance Goal:</b> Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase	24	24	26	29	33	39
With Increase	24	24	26	29	33	39

**Atlantic Salmon (0 FTE and \$1,445,000)** – An increase of \$1,445,000, for a total of \$5,850,000, is requested for Atlantic salmon. This request will be used to implement the Atlantic salmon recovery plan, including research and management activities within NMFS, and to fund recovery activities of the State of Maine.

### **Statement of Need**

Atlantic salmon from the Gulf of Maine Distinct Population Segment (DPS) were jointly listed as endangered by the U.S. Fish and Wildlife Service (FWS) and NMFS in 2000. A draft recovery plan was released by both agencies late in 2004, and was finalized in December 2005. Both NMFS and the State of Maine (through the Maine Atlantic Salmon Commission) have begun implementation activities based on the recovery plan.

As part of the recovery planning process, three key information gaps were identified by NMFS and our partner agencies: (1) where and when salmon migrate in both fresh and saltwater systems; (2) the essential habitat necessary for adult spawning and juvenile rearing; and (3) determining the genetically linked critical adaptive traits for successful salmon populations to increase fitness and survival. The draft recovery plan also outlined four general action types: (1) liming/fertilization of streams and rivers to increase basic productivity; (2) predation management, focused on reducing predators for emerging juvenile salmon; (3) alternative stocking strategies to reduce the risk to genetic diversity from hatchery fish; and (4) habitat modifications/manipulation to increase/restore the habitat types most needed by Atlantic salmon.

### **Proposed Action**

This increase will support ongoing research and recovery efforts geared toward implementing the recovery plan. Examples of NMFS actions include: develop a proposed rule addressing the boundaries of the DPS, based on a stock status review published in FY 2006; convene and serve as a co-chair (with FWS) of an interagency Recovery Implementation Team with representatives from federal, state, and local agencies, Tribes, NGOs, and the Canadian Government to implement the final recovery plan; evaluate the effects of hatchery stocking by the FWS on Atlantic salmon recovery; and evaluate the interaction of water chemistry, habitat, and the transition process for juvenile salmon migrating from rivers to the sea through estuaries. Funds requested will also be provided to the Maine Atlantic Salmon Commission to facilitate their continued research and management activities in support of the recovery plan. Examples of work accomplished with these funds include: assessments of adult and juvenile salmon populations, evaluations of various stocking practices, studies of adult and juvenile migration, and monitoring water quality in Maine salmon rivers. Funds from the NMFS grant provide up to 64% of Commission monies and allow the Commission to complete critical recovery work not done by any other agency or group.

## Benefits

By continuing to implement the recovery plan and gathering critical data on life history and ecological requirements of Atlantic salmon, NMFS will be able to better meet its regulatory requirements under the ESA with regard to this species. Specifically, NMFS will be able to implement recovery strategies using the “best available commercial and scientific information.” As data is collected and analyzed and as the recovery plan is implemented, NMFS will be able to focus its resources on the most critical federal needs, while ensuring that local, state, federal, tribal, and nongovernmental stakeholders remain engaged in the recovery process. Provision of funding to the Maine Atlantic Salmon Commission allows NMFS to leverage its funding to bridge critical data gaps and management strategies that NMFS either cannot meet on its own or that are most appropriately handled at the state level.

## Performance Goals and Measurement Data

This increase will support the objective, “Enhance the conservation and management of coastal and marine resources to meet America’s economic, social, and environmental needs” under the Department of Commerce Strategic Plan Goal of, “Observe, protect, and manage the Earth’s resources to promote environmental stewardship.” The increase also supports the NOAA Strategic Plan goal to “protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management,” and the FY 2007 GPRA measures, “Percentage of Living Marine Resources with Adequate Population Assessments and Forecasts” and “Number of Threatened, Endangered, and Depleted stocks/species with stable or increasing populations.”

<b>Performance Goal:</b> Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase	24	24	26	29	33	39
With Increase	24	24	26	29	33	39

**Pacific Salmon (0 FTE and \$9,664,000)** – NOAA requests an increase of \$9,664,000, for a total of \$66,416,000, for Pacific salmon. This request includes three components: recovery implementation and management actions; improved scientific advice for Pacific salmon recovery; and response to EPA consultation workload.

### *Recovery Implementation and Management Actions*

## Statement of Need

The ESA Pacific salmon program is required to conduct ESA listings, develop recovery plans, issue research, enhancement, and incidental take permits, develop habitat conservation plans, complete ESA section 7 consultations, and implement recovery actions for Pacific salmon.

The program is currently not able to achieve its requirements to complete habitat conservation planning, ESA section 7 consultations, and recovery implementation. This lack of ability to achieve conservation and recovery actions will further delay the overall recovery of these species.

### **Proposed Actions**

NMFS will meet its responsibilities to recovery implementation and management actions by undertaking actions in the following three general areas:

- *Habitat Conservation Planning* – Funds will be used to ensure the successful development and implementation of Habitat Conservation Plans for Pacific salmon. These plans are a cornerstone of efforts to conserve ESA listed species on non-Federal lands. They are essential to the recovery of Pacific salmon as a majority of existing and potential high quality salmon habitat occurs on private lands. Implementation of these efforts also contributes to the Administration's efforts to promote Cooperative Conservation with private landowners.
- *ESA section 7 consultations* – Over the past 4 years, the protected species program has worked to reduce the backlog of ESA consultations and improve the timeliness of consultations with other Federal entities. Consultations vary widely in complexity and controversy and have required increased resources to respond to demands by Congress, the courts, the public, and litigation from nongovernmental organizations and industry. These demands include greater precision, scientific certainty, and transparency in the decision-making process. At their most complex, formal consultations can now take several months or years and can become the centerpiece of extensive legal challenges. Without increased support for consultations, the program will revert to a point where consultations are continually delayed and constituents are continually unhappy with the pace of the effort.
- *Recovery Implementation with local partners* – In FY 2007, the Protected Species program will be implementing recently completed recovery plans for Puget Sound and the Lower Columbia River. The full implementation of these plans relies on a cooperative effort from local partners. The Protected Species Program will help guide recovery efforts and provide expert advice to those looking to implement recovery actions. Increased funding will allow the program to track the performance of recovery implementation efforts and monitor the success of recovery plan implementation.

### **Benefits**

The items above provide a solid foundation for Pacific salmon recovery on the West Coast. These efforts are critical to achieving recovery on an expedited timeframe, while at the same time providing good customer service to constituents looking to implement recovery actions, as well as carry out other lawful activities. Without the proposed increase, the program not have the resources to adequately provide customer service and the species will suffer from a lack of coordinated local action on recovery.

*Improved Pacific Salmon Science Support*

## Statement of Need

Increased effort and funding in FY 2007 will be focused on predicting ocean survival of Pacific salmon, evaluating management actions, improving research on the effects of hatcheries on salmon recovery, and evaluations of the cost effectiveness of various recovery actions.

## Proposed Actions

NMFS will meet its responsibilities to improved Pacific salmon science support by undertaking actions in the following four general areas:

- *Predictors of Salmon Survival in the Ocean* – Predictors of how ocean conditions affect salmon survival are needed to improve harvest guidelines and to assess effectiveness of restoration and recovery activities in freshwater habitats. Physical and biological metrics will be integrated into an index of ‘ocean condition’ that will be related to low, average, or high returns of salmon. This will no longer make the ocean a “black box” in management decision-making.
- *Evaluation of Management Actions on Salmon Production and Survival using New Technologies* – Recent advances in fish tagging and tracking technology will dramatically improve evaluation of the efficacy of restoration actions at a watershed and provincial level. This information will provide critical new information on salmon life history and survival and may radically alter our estimates of salmon response to restoration. This new information could affect policy and greatly improve future management of Pacific salmon recovery.
- *Hatcheries Research* – The long-term genetic impact on wild fish fitness due to hatchery supplementation is one of the most critical uncertainties in salmon recovery planning. A long-term research project will be started to directly measure the rate of genetic domestication that occurs due to hatchery breeding and rearing. The answer to this question is essential to understand the benefits and risks of hatchery supplementation to improve depleted populations.
- *Cost-effectiveness of salmon and steelhead recovery actions* – There is a significant gap in data on the economic costs and biological effects of recovery actions for ESA listed salmon. Data necessary to assess the cost-effectiveness of those actions, including harvest reductions, hatchery reforms, modifications to hydropower facilities and operations, and habitat restoration and protection, will be collected. This project is essential to facilitate recovery planning and the results will be incorporated into recovery planning implementation documents.

## **Benefit**

The increased information will be directly used by managers to improve recovery actions and focus recovery efforts on those actions with the highest likelihood of success. Salmon managers will be better able to: predict ocean abundance and develop improved harvest and protection strategies; improve prioritization of restoration projects; understand the benefits and risks of hatchery supplementation, and focus limited resources on those actions with the highest benefit and lowest cost.

*Section 7 Consultations - Environmental Protection Agency (EPA) Pesticide Court Decision Workload* – This increase will be used for necessary costs to meet court-ordered time lines to conduct ESA section 7 consultations with EPA. These consultations are required by rulings on pesticide lawsuits in California, Oregon, Idaho, and Washington State. Other lawsuits are pending. NMFS can generally complete a draft biological opinion of average complexity in 135 days. Because pesticide consultations are relatively new, and often very complex, NMFS estimates that initial development of draft biological opinions on pesticides may take significantly longer.

## **Statement of Need**

Until recently, EPA did not conduct section 7 consultations on the actions they funded, authorized, or carried out pursuant to the Clean Water Act (CWA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). In 2002, EPA initiated consultation with NMFS on its registration or re-registration of several pesticides in response to legal challenges in the States of Washington and California. In response to these legal challenges, and in the interest of preventing future legal challenges, EPA plans to routinely consult with NMFS on its registration and re-registration of pesticides. These requests have added 48 formal and 22 informal consultations in FY 2005, and are expected to add about 50 formal and 100 informal consultations to NMFS' existing, annual workload.

The pesticide consultation workload represents a significant increase to NMFS. Pesticide consultations are extremely complex and require specialized technical expertise (e.g., toxicology), which NMFS currently lacks. The proposed increase would allow NMFS to obtain toxicological expertise and fund additional research to address data gaps. The increase will allow senior Section 7 biologists to be dedicated full-time to write and coordinate Biological Opinions with the assistance of toxicologists, spatial analysts, and junior staff biologists. Existing staff capacity is not adequate to absorb the new pesticide workload without creating significant impacts to other consultation programs.

The actions flowing from the administration of FIFRA will result in a new and significant increase in NMFS' consultation workload. In addition, NMFS' section 7 consultations with EPA have historically been among the most complex, owing to the chemical and toxicological expertise required and the amount of legal and political controversy surrounding these issues.

To address this increased consultation workload and ensure that the results of NMFS' consultations can withstand rigorous legal challenge, NMFS must increase the number of consulting biologists, their technical expertise, and the amount of toxicological expertise available in NMFS Science Centers. As a result, more financial support will be required for NMFS to respond to the entire increased workload associated with these consultations.

### **Proposed Actions**

With the requested increase, NMFS will increase its capacity in three specific areas: (1) overall capacity to respond to the increased consultation workload; (2) overall capacity to conduct risk assessments of environmental pollutants; and (3) overall capacity to acquire, evaluate, and produce data and information associated with the chemistry and toxicology of environmental pollutants, the impact of pollutants on aquatic ecosystems, and the physiological responses of living marine resources to those pollutants. The increases requested will allow NMFS to:

- Hire additional consulting biologists and train existing personnel to increase national capacity to conduct section 7 consultations with EPA's Office of Water and Office of Pesticide Programs and complete biologically sound and legally defensible section 7 consultations and consultation products (biological opinions and concurrence letters). A portion of these increases will cover the additional secretarial and records management personnel who will be needed to complete these consultations in compliance with applicable law.
- Hire additional environmental toxicologists and animal physiologists to increase the national capacity available in NMFS' Science Centers to provide the expertise necessary to support the National, Regional, and Field Office consultations with EPA on pesticide registrations.
- Collaborate with other NOAA programs, other federal agencies, industry, nongovernmental organizations, and academia to gather, evaluate, integrate, and synthesize the available data and other information on the chemistry and toxicology of environmental pollutants, the impact of pollutants on aquatic ecosystems, and the physiological response of living marine resources to those pollutants.

### **Benefits**

Increasing NMFS' capacity to conduct and complete these consultations with EPA will allow NMFS to fulfill its statutory mandates and, by reducing the impact of water pollution on threatened and endangered species, these consultations will make substantial contributions to the recovery of threatened and endangered species.

### **Performance Goals and Measurement Data**

The increase for ESA Pacific Salmon will support the objective "Enhance the conservation and management of coastal and marine resources to meet America's economic, social, and environmental needs" under the Department of Commerce strategic goal to "Observe, protect, and manage the Earth's resources to promote environmental stewardship" and the NOAA Goal to "Protect, restore, and manage the use of coastal and ocean resources through an

ecosystem approach to management.” Specifically, the increase supports the Ecosystem Performance Goal and GPRA measure, “Number of protected species designated as threatened, endangered or depleted with stable or increasing population levels.”

<b>Performance Goal:</b> Number of Protected Species listed as threatened, endangered, or depleted with stable or increasing population levels	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase	24	24	26	29	33	39
With Increase	24	24	26	29	33	39
<b>Performance Goal:</b> Number of consultations with EPA	<b>FY 2005</b>	<b>FY 2006</b>	<b>FY 2007<sup>1</sup></b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>
Without Increase (# Consultations completed/ # Active Consultation Requests) <sup>2</sup>	3/56	3/221	3/320	3/482	3/644	3/806
With Increase (# Consultations completed/ # Active Consultation Requests) <sup>2</sup>	3/56	3/221	25/320	25/460	25/600	25/740

1. With the funds requested in FY 2007, NOAA will be able to complete approximately 20% of the consultation requests. The funding will support the highest-priority consultations.
2. Assumes new requests for formal consultation will be submitted to NOAA at the current rate. This rate could change due to a variety of circumstances.

**TERMINATIONS FOR FY 2007:** The following programs, or portions thereof, have been terminated in FY 2007: Marine Mammals (\$18,883,000), Marine Turtles (\$4,468,000), Pacific Salmon (salmon management activities - \$197,000).